

DQA:

Date: 16.04.13



QA Closed:

Date: 16/03/30

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only ☐

Work Order: <u>142043</u> Part No. <u>142043</u> NCR No. <u>16-5690</u>		DISPOSITION Rework ☐ Scrap ☒ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Cross tube ☐ Water Jet ☐ Engineering ☐ Machining ☒ Small Fab ☐ Prod. Eng. Coord. ☐ Quality ☐ Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐ Large Fab ☐ Composite ☐ Supplier ☐					
Date: <u>16/03/21</u>		Step #: <u>120</u>		QTY Effective: <u>1</u>			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition			DAS 9 9-89 <u>16-03-21</u> Completed By DAS 14 <u>16/03/21</u> 9-89 Lead hand / Supervisor Approval Verification DAS 9 9-89 <u>16-03-21</u> QC / QA Coordinator DAS Approval 9 9-89 <u>16-03-21</u>		
a big mark at the end of the part. tool crash crash in part RC operator error programming wrong number				scrap & replace <u>M 134462</u>					
Root Cause Environment ☐ No Re-verification ☐ Design ☐ Operator ☒ Doc/Data ☐ Offset/Setup ☐ Equip/Tooling ☐ Supplier ☐ Handling/Pre ☐ Training ☐ Material ☐ Use for Testing ☐ Internal Transport ☐ Poor Information ☐ Tribal Knowledge ☐ Rushing ☐ LOA ☐ Product Improvement ☐ Substation ☐ Process Improvement ☐ Past Expiry Date ☐ Manufacturing Process ☐ Misidentified ☐ Past Due ☐		Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☒		FAULT CATEGORY Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐		Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	
OTHER: ☐									

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Work Order ID 142043

February 23, 2016 4:21:01 PM

142043

Page 3

Item ID: D5369-2 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Cable Guard
Start Date: 2/23/2016 Start Qty: 6.00 ***6*** Cust Item ID:
Required Date: 3/11/2016 Req'd Qty: 6.00 ***6*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	Identify as per dwg & Stock Location: <u>S260B</u>	0.00							
150									
Packaging	Memo	0.00							<u>MAR 21 2016</u>
Packaging									
160	QC21- Final Inspection - Work Order Release	0.00							
160									
QC	Memo	0.01							<u>MAR 22 2016</u>
Quality Control									

MS MAR 21 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					

Picklist Print

February 23, 2016 4:21:06 PM

Page 1

Work Order ID: 142043

142043

Parent Item: D5369-2

D5369-2

Parent Item Name: Cable Guard

Start Date: 2/23/2016

Required Date: 3/11/2016

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP REV:A 15.12.09 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MUHMWB1.750X1.00 0X96.00		Purchased		No			f	0.0000		41.17895			

***MUHMWB1 750X1 000X96 00**

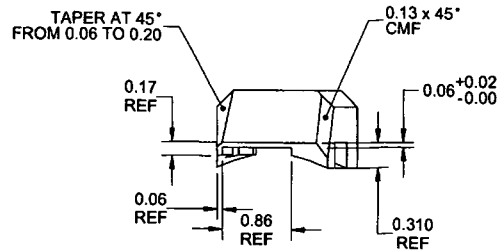
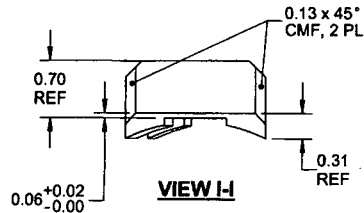
UHMW 1.75x1.00x96.00 (Tolerance +/- .010)

M 134462 →

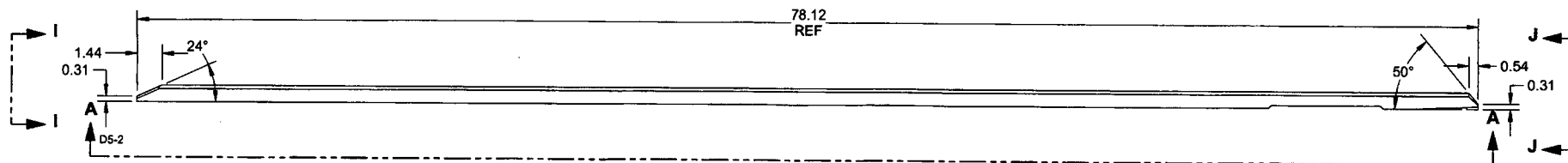
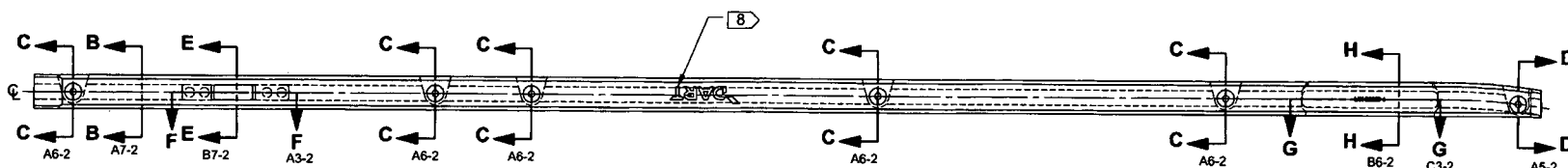
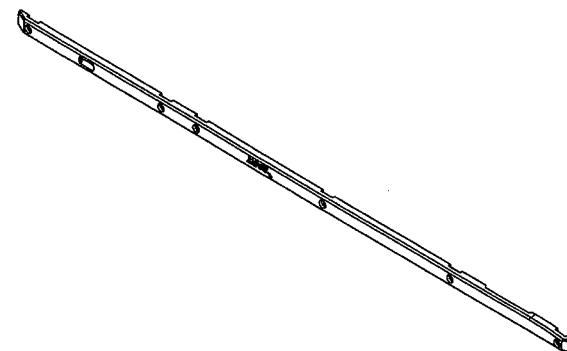
~~124~~ 56

ML 16/03/21

8 7 6 5 4 3 2 1



VIEW J-J



D5369-1 CABLE GUARD

NOTES:

- 1) MATERIAL: UHMW BLACK TIVAR 1000 VIRGIN MATERIAL
REF DART SPEC MUHMB100
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.020 TO 0.040 MAX
- 6) IDENTIFICATION: ENGRAVE P/N ON LOWER SIDE TO MAX DEPTH OF 0.010 AND MIN RADIUS OF 0.010
- 7) WEIGHT: 3.17 lbs
- 8) ENGRAVE DART LOGO AS SHOWN ON UPPER SIDE TO MAX DEPTH OF 0.015 AND MIN RADIUS OF 0.125
- 9) MACHINE CONSTANT SECTION B-B UNLESS OTHERWISE NOTED
- 10) ALL HOLES DRILLED ON CENTERLINES
- 11) UNDEFINED FEATURES CONTROLLED BY CAD FILE D5369-1 REV. A.SLDPRT

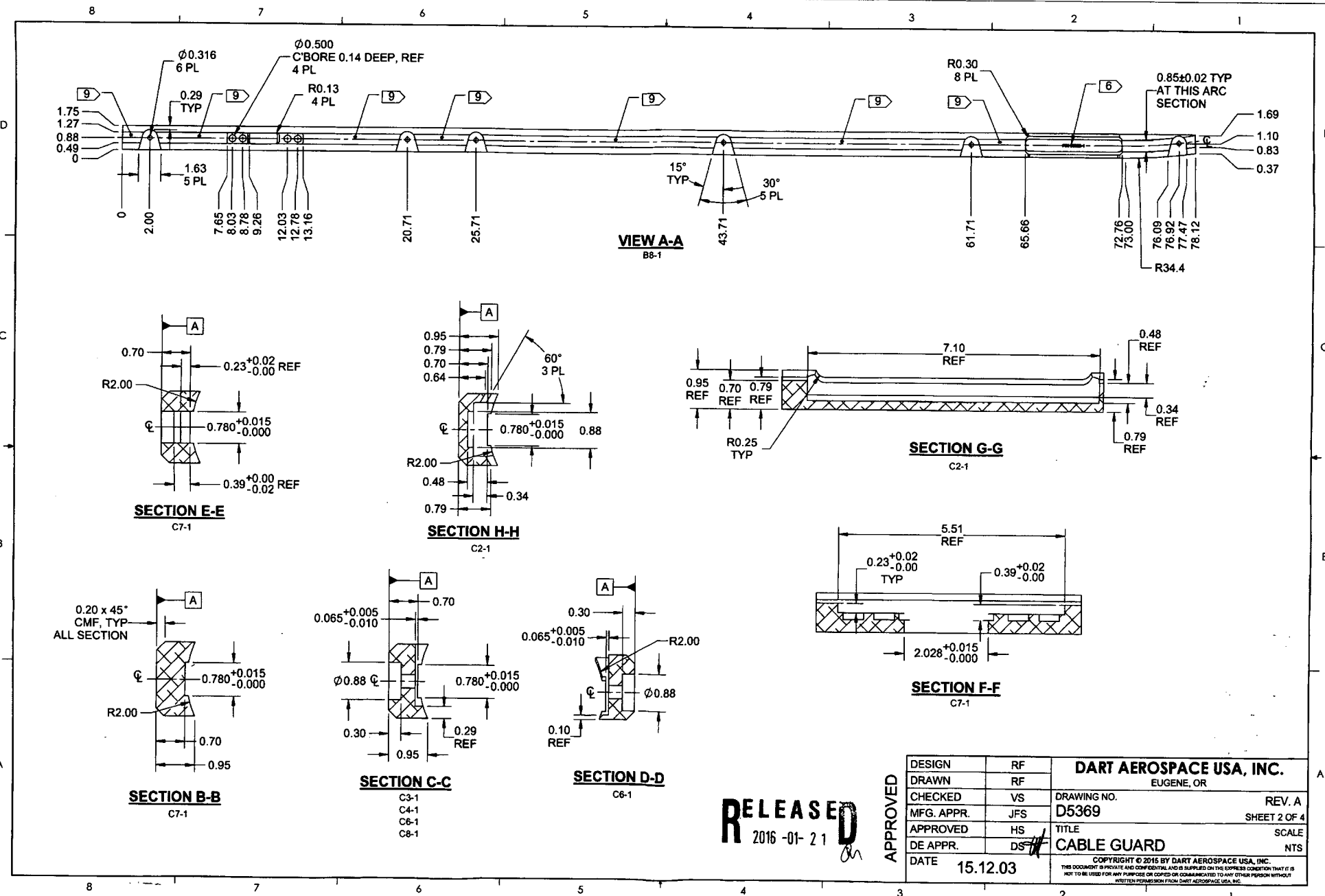
RELEASED
2016-01-21
ECN 16510

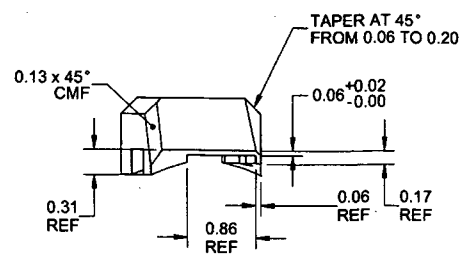
APPROVED

SW 142043
20160223

REV.	NEW ISSUE	RF	15.12.03
DESIGN	RF	DESCRIPTION	DATE
DRAWN	RF	DART AEROSPACE USA, INC. EUGENE, OR	
CHECKED	VS	DRAWING NO.	REV. A
MFG. APPR.	JFS	D5369	SHEET 1 OF 4
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	CABLE GUARD	NTS
DATE	15.12.03	COPYRIGHT © 2015 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

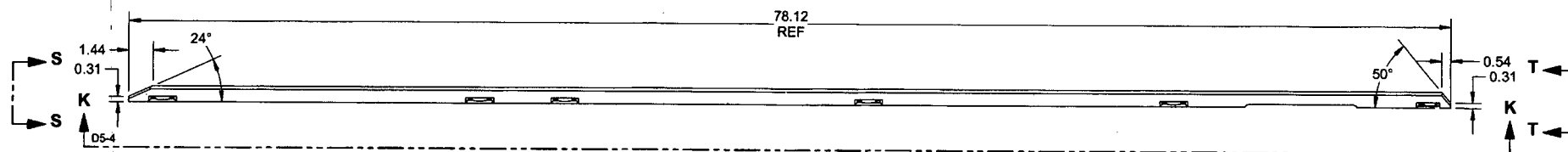
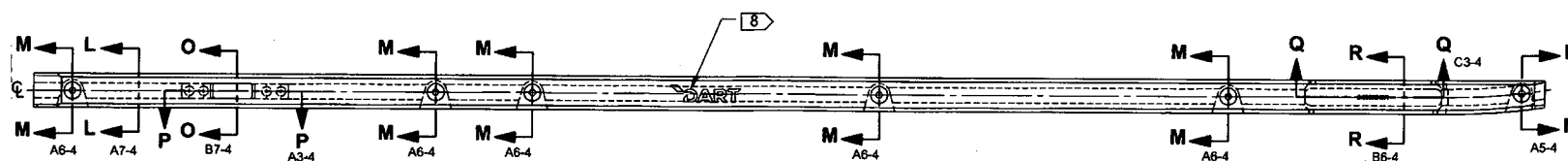
8 7 6 5 4 3 2 1





VIEW S-S

VIEW T-T



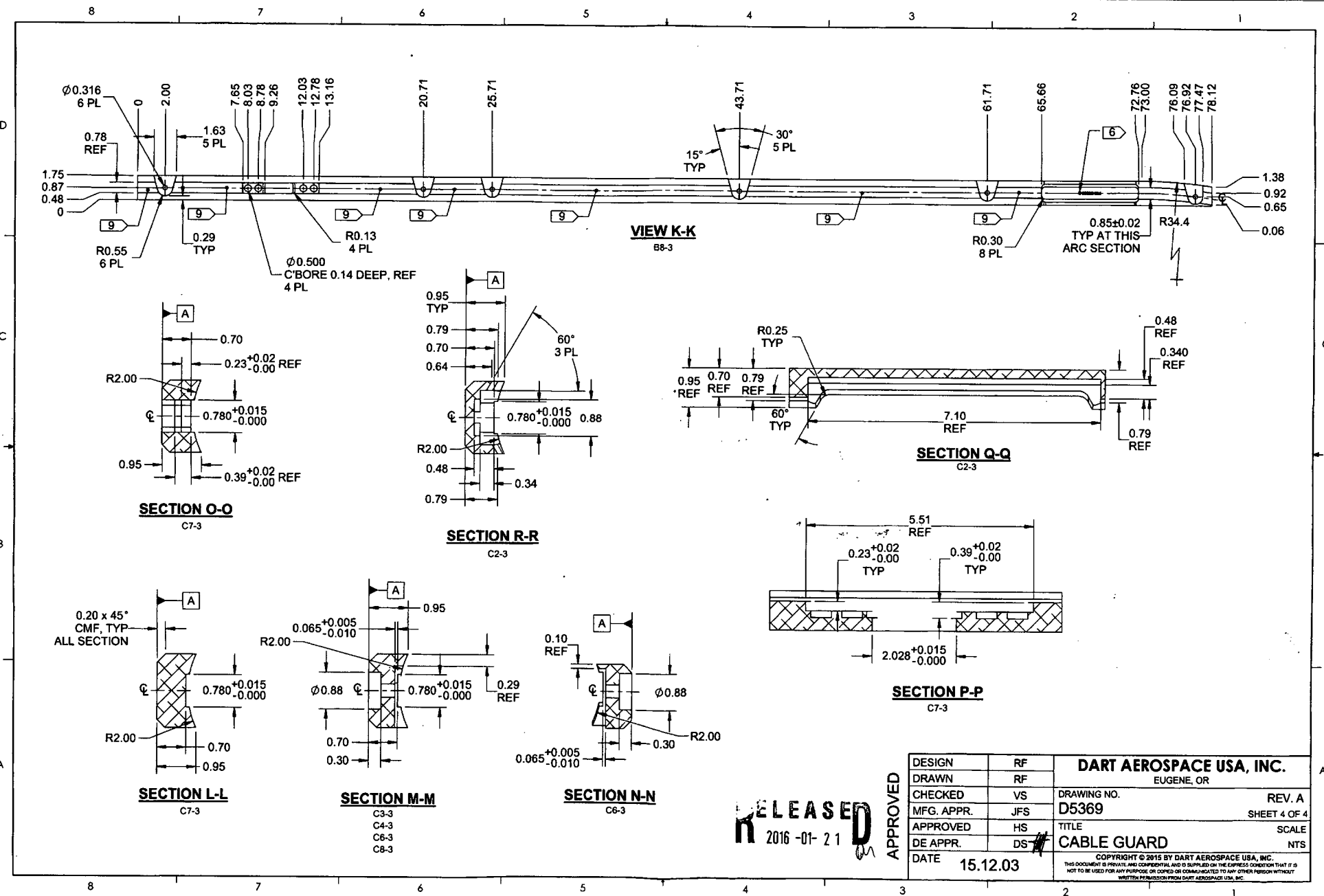
NOTES:

- 1) MATERIAL: UHMW BLACK TIVAR 1000 VIRGIN MATERIAL
REF DART SPEC MUHMWB100
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.020 TO 0.040 MAX
- 6) IDENTIFICATION: ENGRAVE P/N ON LOWER SIDE TO MAX DEPTH OF 0.010 AND MIN RADIUS OF 0.010
- 7) WEIGHT: 3.17 lbs
- 8) ENGRAVE DART LOGO AS SHOWN ON UPPER SIDE TO MAX DEPTH OF 0.015 AND MIN RADIUS OF 0.125
- 9) MACHINE CONSTANT SECTION L-L UNLESS OTHERWISE NOTED
- 10) ALL HOLES DRILLED ON CENTERLINES
- 11) UNDEFINED FEATURES CONTROLLED BY CAD FILE D5369-2 REV. A.SLDPRT

RELEASE
2016-01-21

APPROVED

DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	EUGENE, OR	
CHECKED	VS	DRAWING NO.	REV. #
MFG. APPR.	JFS	D5369	SHEET 3 OF
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	CABLE GUARD	NT
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DATE	15.12.03		



DART AEROSPACE LTD		Work Order:	142043
Description: Cable Guard		Part Number:	D5369-2
Inspection Dwg: D5369 Rev: A		Page 1 of 1	

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
.06	$\pm .030$	.065	✓		Vern ML-06	
.13 X 45°	$\pm .030 \times \pm 1/2^\circ$	.135 X 45°	✓		"	
1.44	$\pm .030$	1.440	✓		"	
.31	$\pm .030$	.315	✓		"	
24°	$\pm 1/2^\circ$	24°	✓		B-Square	
50°	$\pm 1/2^\circ$	50°	✓		"	
.54	$\pm .030$	.520	✓		Vern ML-06	
.31	$\pm .030$	.320	✓		"	
.48	$\pm .030$	.480	✓		"	
.87	$\pm .030$	.875	✓		"	
1.75	$\pm .030$	1.750	✓		"	
8.316	$\pm .030$	8.316	✓		"	
2.00	$\pm .030$	2.000	✓		"	
1.630	$\pm .030$	1.630	✓		"	
.29	$\pm .030$	.285	✓		"	
7.65	$\pm .030$	7.645	✓		"	
8.03	$\pm .030$	8.030	✓		"	
8.78	$\pm .030$	8.780	✓		"	
9.26	$\pm "$	9.260	✓		"	
12.03	"	12.030	✓		"	
12.78	"	12.780	✓		"	
13.16	"	13.160	✓		"	
20.71	*"	20.710	✓		M-tape	
25.71	"	25.710	✓		"	
43.71	"	43.710	✓		"	
61.71	"	61.710	✓		"	
65.66	"	65.660	✓		"	
72.76	"	72.760	✓		"	
73.00	"	73.000	✓		"	
76.09	"	76.090	✓		"	
76.92	"	76.920	✓		"	
78.12	DAS	78.120	✓	DAS	"	

Measured by:	14 9-89	Checked by:	45 9-89	QC Inspector:	
Date:	11/03/19	Date:	2016-3-21	Date:	

Engineering Approval: (If necessary)		Date:	
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Rev	Date	Change	Revised by	Approved
B	14.07.31	New Issue	KJ	

